



## PHOTO & CAPTION

# Making an Antenna out of a Water Bottle



Photo: Ian Howard, Geekcorps

***Geekcorps volunteers Rian Aldridge and Moussa Keita install a “do-it-yourself” antenna.***

Accessing information is notoriously difficult in Mali’s rural areas, where computers are scarce and Internet connections scarcer. To bridge this communications gap, USAID is helping establish community learning and information centers, some of which use innovative new low-cost antennas to connect to the wireless Internet.

The “do-it-yourself” antenna design, developed by USAID partner Geekcorps, uses materials that are easily available in Mali, including plastic water bottles, used motorcycle parts, window screen cuttings and coaxial cables. This approach minimizes the technical skills needed to build the antennas and significantly reduces costs. The first tests — performed using prototypes assembled from materials costing about \$1 per antenna — concluded that the antennas provided clear signal and a reliable Internet connection. To further reduce costs, the radio receivers were powered by cell phone chargers and mounted with the antenna directly on the antenna mast, eliminating the need to purchase expensive cabling to connect the antenna to the receiver.

Thanks to this design, a community can now build a wireless Internet antenna and power the receiver for about \$3, compared to about \$100 if using commercial equipment.

### Telling Our Story

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